

Page 8 of 12  
Stuelpnagel et al.  
Serial No.: 09/606,369  
Filing date: June 28, 2000

### REMARKS

By the present communication new claim 57 has been added and claims 53 and 54 have been canceled without prejudice to pursuing the subject matter of these claims in one or more applications claiming priority to the above-captioned application. Following entry of the amendments claims 29-52 and 55-57 will be pending and under examination.

Claims 29, 37, 38, 39 and 40 have been amended to include the subject matter of claim 54. The recitation of "a clamp providing increased pressure between said lid and said baseplate" has been removed from claims 29, 37, 38, 39 and 40 and replaced with dependent claim 57. Claim 55 has been amended to modify antecedent basis in view of the changes to claims 29, 37, 38, 39, 40 and 54. Claim 56 has been amended to correct an error introduced in the amendment submitted on August 22, 2005, support for which can be found in the specification, for example, at page 10, line 9. Accordingly, the amendments do not raise any issues of new matter. Furthermore, Applicant respectfully submits that entry of the amendments after final is proper because the amendments cancel claims, place the claims into condition for allowance or in better form for consideration on appeal, and do not raise new issues for consideration in accordance with 37 C.F.R. 1.116 and MPEP 714.12 and 714.13. Therefore, entry of the amendments is respectfully requested.

### Rejections Under 35 U.S.C. § 103

Claims 29-35 are rejected under 35 USC § 103(a) as allegedly obvious over Whitehead, et al. (U.S. 4,879,097) in view of Kolehmainen, et al. (U.S. 4,349,510) and Tajima et al. (U.S. 5,682,232). The Office Action alleges that Whitehead et al. describes a device including all of the elements of the claimed hybridization chamber with the exception of a sealant between the base plate and the lid forming an airtight seal. Kolehmainen et al. is relied upon for allegedly describing the use of an o-ring to make a light-tight closure. The Office Action alleges that one skilled in the art would have been motivated to replace the ribs (21) between the base plate and lid of the Whitehead et al. device with an o-ring because the ribs and o-ring have equivalent light excluding properties. The Office Action further alleges that an o-ring used in the device of

Page 9 of 12  
Stuelpnagel et al.  
Serial No.: 09/606,369  
Filing date: June 28, 2000

Whitehead et al. would inherently provide an airtight seal. The Office Action acknowledges that the combination of Whitehead et al. and Kolehmainen et al. does not teach a clamp providing increased pressure between the lid and base plate. The Office Action relies upon disclosure in Tajima et al. in alleging that an o-ring and an o-ring with a clamp are one in the same.

Claims 36-51 and 53-56 are rejected under 35 USC § 103(a) as allegedly obvious over Whitehead et al. (U.S. 4,879,097) in view of Kolehmainen et al. (U.S. 4,349,510) and Tajima et al. (U.S. 5,682,232) taken further in view of Walt et al. (U.S. 6,327,410). The Office Action relies upon the rejection set forth in regard to claims 29-35 and further alleges that it would have been obvious to modify the fiber optic sensor of Whitehead et al. to include the bioactive agents described in Walt et al. for the known and expected result of providing a means recognized in the art for contacting a fiber optic sensor with a sample analyte for detection.

Applicant respectfully traverses the rejections of claims 29-51 and 53-56 for the reasons already of record. Nevertheless, in order to further prosecution of this application the claims have been amended to include the subject matter of claims 53 and 54. More specifically, the claims have been amended to require that the "assay locations contain a sample solution comprising a plurality of different target analytes having a fluorescent label." Accordingly, Applicant will address the rejection as it was presented in the Office Action in regard to claims 53 and 54.

In regard to the subject matter of claims 53 and 54, the Office Action alleges that when using the random array of microspheres of Walt et al., the microplate would include a plurality of target analytes and that it is known to fluorescently label target analytes. Applicant respectfully submits that whether or not the array of Walt et al. can be used with a microplate having a plurality of fluorescently labeled target analytes, there is no motivation in the art of record to do so in combination with the detection device alleged to result from modifying Whitehead et al. in view of Kolehmainen et al. In contrast to the detection device of the cited art, the claimed device is a hybridization chamber. The only motivation provided in the office action to combine references is in the context of detection. There is no motivation to combine the references of Whitehead et al., Kolehmainen et al. and Walt et al. for any reason other than analyte detection.

Page 10 of 12  
Stuelpnagel et al.  
Serial No.: 09/606,369  
Filing date: June 28, 2000

Thus, although detection is not a limitation of the pending claims, it is relied upon by the Office for motivation to combine the references, and will be addressed below.

Those skilled in the art would not have been motivated to modify the device of Whitehead et al. to include assay locations containing a sample solution comprising a plurality of different target analytes having a fluorescent label. The Whitehead et al. device uses a piece of film to detect luminescence. Nowhere, does the reference taken alone or in view of Kolehmainen et al. and Walt et al. describe how to modify the device for detection of a fluorescent label. More specifically, there is no description of how to introduce light to the chamber of the Whitehead et al. device in such a way that useful detection could occur on the piece of film.

Even if there was some motivation to modify the device of Whitehead et al. in view of Kolehmainen et al. and Walt et al. for detection of a fluorescent label, there would not have been any motivation in the art of record to include assay locations having a sample solution comprising a plurality of different target analytes having the fluorescent label. Such a sample solution if present in the modified device would produce a fluorescent signal. There is no teaching or suggestion in the art of record as to how signal from the array of Walt et al. could be detected in the presence of background fluorescence from the solution. Rather those skilled in the art would have been motivated to remove the sample solution having the fluorescent label prior to detecting the array of Walt et al. in order to distinguish different bioactive agents on the array that interact with different target analytes.

Applicant further contends that claim 56 is not obvious over Whitehead, et al. in view of Kolehmainen, et al. and further in view of Walt et al. Claim 56 requires that the second array component is not a fiber optic array. The Office Action relies upon the disclosure in Whitehead et al. of supports taking the form of fiber optic sensors and the disclosure in Walt of using fiber optic sensors having different bioactive agents. Any teaching or suggestion of modifying a fiber optic sensor of Whitehead et al. to a form described by Walt et al. would not have motivated one skilled in the art to make and use a hybridization chamber in which the first array component is not a fiber optic array. Therefore, Applicant respectfully requests withdrawal of the rejection of

Page 11 of 12  
Stuelpnagel et al.  
Serial No.: 09/606,369  
Filing date: June 28, 2000

claims 29-51 and 53-56 under § 103 over Whitehead, et al. in view of Kolehmainen, et al.,  
Tajima et al. and Walt et al.

Claim 52/29 is rejected under 35 USC § 103(a) as allegedly obvious over Whitehead, et al. (U.S. 4,879,097) in view of Kolehmainen, et al. (U.S. 4,349,510) and Tajima et al. (U.S. 5,682,232) taken further in view of Heffelfinger et al. (U.S. 5,784,152). Applicant respectfully traverses the rejection. Applicant maintains that the combination of Whitehead et al., Kolehmainen et al. and Tajima et al. does not teach or suggest the claimed hybridization chamber including the recited sample solution comprising a plurality of different target analytes having a fluorescent label for the reasons set forth above in response to the rejection of claims 29-51 and 53-56. Heffelfinger et al. does not cure the deficiencies of these two references because Heffelfinger et al., taken alone or in combination with them, does not teach or suggest making or using a sample solution comprising a plurality of different target analytes having a fluorescent label in the Whitehead et al. device, whether or not the Whitehead et al. device includes the o-ring of Kolehmainen et al. Therefore, Applicant respectfully requests withdrawal of the rejection of claim 52/29 under § 103 over Whitehead, et al. in view of Kolehmainen, et al. and Tajima et al. and further in view of Heffelfinger et al.

Claims 52/37, 38, 39 or 40 are rejected under 35 USC § 103(a) as allegedly obvious over Whitehead, et al. (U.S. 4,879,097) in view of Kolehmainen, et al. (U.S. 4,349,510), Tajima et al. (U.S. 5,682,232) and Walt et al. (U.S. 6,327,410) taken further in view of Heffelfinger et al. (U.S. 5,784,152). Applicant respectfully traverses the rejection. Applicant maintains that the combination of Whitehead et al., Kolehmainen et al. and Tajima et al. does not teach or suggest the claimed hybridization chamber including the recited sample solution comprising a plurality of different target analytes having a fluorescent label for the reasons set forth above in response to the rejection of claims 29-51 and 53-56. Heffelfinger et al. does not cure the deficiencies of these two references because Heffelfinger et al., taken alone or in combination with them, does not teach or suggest making or using a sample solution comprising a plurality of different target analytes having a fluorescent label in the Whitehead et al. device, whether or not the Whitehead et al. device includes the o-ring of Kolehmainen et al. Therefore, Applicant respectfully requests

Page 12 of 12  
Stuelpnagel et al.  
Serial No.: 09/606,369  
Filing date: June 28, 2000

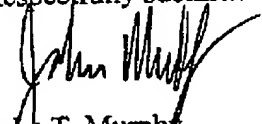
withdrawal of the rejection of claims 52/37, 38, 39 or 40 under § 103 over Whitehead, et al. in view of Koléhmainen, et al., Tajima et al. and Walt et al. and further in view of Heffelfinger et al.

New claim 57, includes language removed from the independent claims, and recites that the hybridization chamber further comprises a clamp providing increased pressure between said lid and said baseplate. Applicant maintains, for the reasons made of record previously in regard to the independent claims, that it would not have been obvious to modify the device of Whitehead et al. to include an o-ring and a clamp as claimed. Therefore, new claim 57 is not obvious.

### CONCLUSION

In light of the Amendments and Remarks herein, Applicant submits that the claims are in condition for allowance and respectfully request a notice to this effect. The Examiner is invited to call the undersigned agent should there be any questions.

Respectfully submitted,

  
John T. Murphy  
Registration No. 50,583

Date: May 01, 2006

9885 Towne Centre Drive  
San Diego, CA 92121-1975  
Telephone: 858.202.4711  
Facsimile: 858.202.4599